Email

Becoming Wireless

By Thomas Kidd - January-March 2009

In April 2008, the Department of the Navy Chief Information Officer (DON CIO) released a report called "Department of the Navy Enterprise Mobility 2008." This concise report describes the strategy the DON would use to leverage the significant advantages that commercially available wireless technologies can deliver to our warfighters and those who support them. The report is available for download on the DON CIO Web site at www.doncio.navy.mil under the Products link.

Enterprise mobility affects everyone and everything, everywhere across the DON. Though it may be less obvious for some of us than for others, we are all dependent on technology that connects to either a wired or wireless infrastructure. One of the department's greatest strengths is the interconnection of people and processes. Because of its unique mobility requirements, the DON has many more wireless connections than our civilian counterparts in industry.

As we move into the second decade of the 21st century, even more of these connections will become wireless. Before we enter the third decade, enterprise mobility through wireless technology will expand access to information wherever warfighters are located, regardless of the existence of a wired infrastructure.

However, all wireless technologies have inherent drawbacks and resultant concerns. Some of the key concerns are described below.

• Information Assurance. Can the traffic be intercepted and read by an adversary or easily jammed, thereby preventing information from getting through? This is particularly important as classified voice and Secure Internet Protocol Router Network (SIPRNET) communications will increasingly utilize wireless transport modes.
• Interference. Will introducing new radio frequency emanations into a military environment negatively impact existing systems? Interference can hamper communications, degrade the performance of collocated electronics, or even cause ordnance to malfunction, an effect called Hazards of Electromagnetic Radiation to Ordnance, or HERO.
• Robustness. Will the solution work across settings? For example, different frequencies have different propagation characteristics; what works well in a wide open environment may not work nearly as well in a shipboard environment with its numerous metallic enclosed spaces.
• Non-standard spectrum allocation. Differing spectrum assignments in some countries mean that some equipment cannot be used globally unless there is permission to operate from the host nation.

Implementation of wireless technologies cannot go forward until these potential drawbacks are satisfactorily addressed. Department of the Navy Enterprise Mobility 2008 describes the strategy the department is following in assessing and adopting commercially available wireless products.

To establish a governance framework and information repository to enable deployment of secure, interoperable, cost effective and capability enhancing wireless architectures, the DON CIO chartered the DON Wireless Working Group (DWWG) for Enterprise Mobility under the DON Information Executive Committee. The DWWG is a problem-solving forum. It makes recommendations to the DON Information Executive Committee regarding wireless solutions and strategies suitable for enterprise application.

The DWWG is a critical component of the department's efforts to minimize and manage the risk involved in introducing new technologies to the DON technical architecture. Since it was chartered in 2005, the DWWG has published policy and guidance and continually works to align wireless opportunities and capabilities with mission needs and DON deficiencies.

The key to the DWWG's success is the participation of DON employees with expertise in the enterprise application of commercial wireless technology and strategic planning, along with indust

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